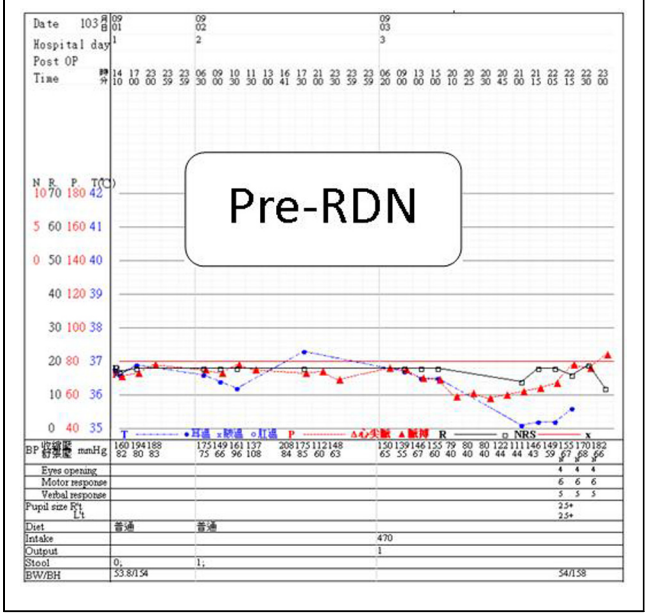
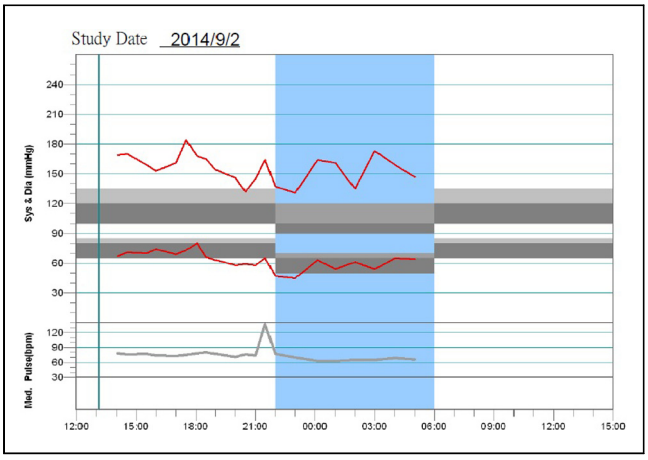


Case Summary. Very angulate neck of AAA could result in missing landing zone for main body of AAA

Bailout PTA/stent to left renal artery was used to protect renal perfusion while extending the length of landing zone



TCTAP C-179

Renal Angioplasty Assisted Renal Denervation: Hybrid Strategy in a Patient with Resistant Hypertension and Renal Artery Stenosis

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[CLINICAL INFORMATION]

Patient initials or identifier number. 22304779 CYL

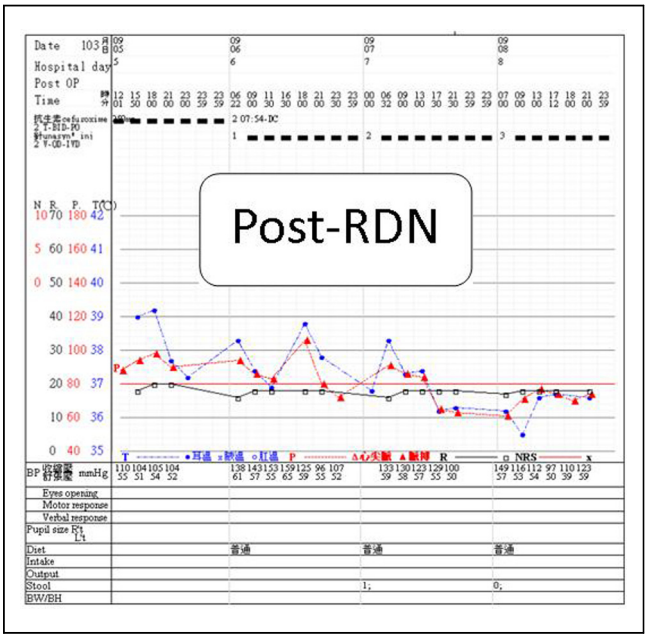
Relevant clinical history and physical exam. The 62-year-old female has resistant hypertension, type 2 DM, hyperlipidemia and a history of PCI for coronary artery disease.

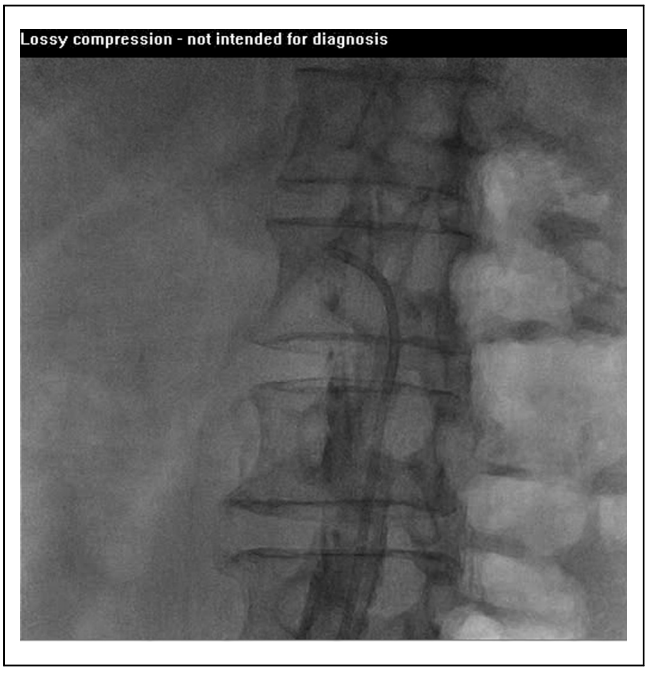
Her 24-hour systolic blood pressure was above 150 mmHg despite five antihypertension drugs. The office blood pressure was more than 160 mmHg. The results of secondary hypertension screening, including serum level of renin, spironolactone, cortisol, ACTH, and thyroid profiles, were not relevant. Renal angiography and denervation were the subsequent treatment.

Relevant test results prior to catheterization.

2014/09/05 Cortisol level: 6.06ug/dl
ACTH level: 40.14pg/ml
2014/09/06 Aldosterone level: 5.92 ng/dl
Plasma renin activity: 0.52 ng/ml/hr
2014/09/03 Ambulatory Blood Pressure Measurement:

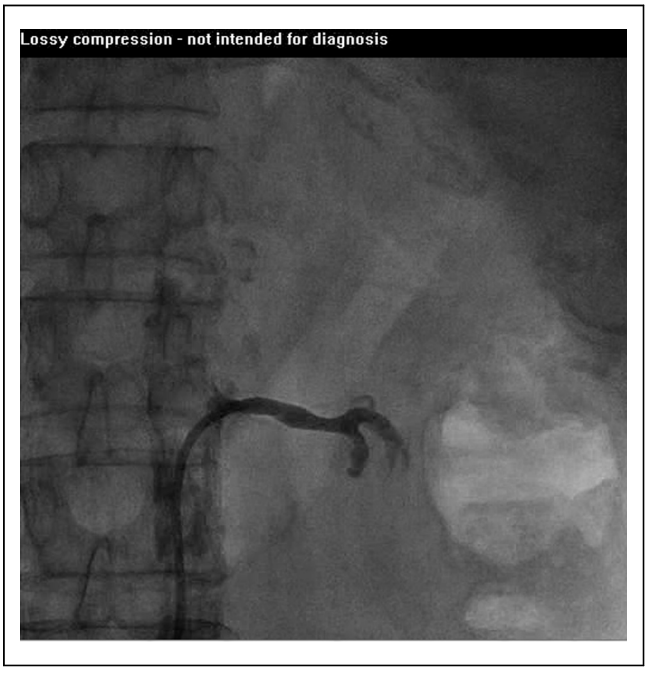
1. The mean 24-hr BP was 155/62 mmHg, the mean awake BP was 159/68 mmHg, and the mean asleep BP was 151/57 mmHg.
2. The highest BP was 173/54 mmHg at 03:01, and the lowest BP was 132/59 at 20:30.





Relevant catheterization findings. Renal artery angiography:

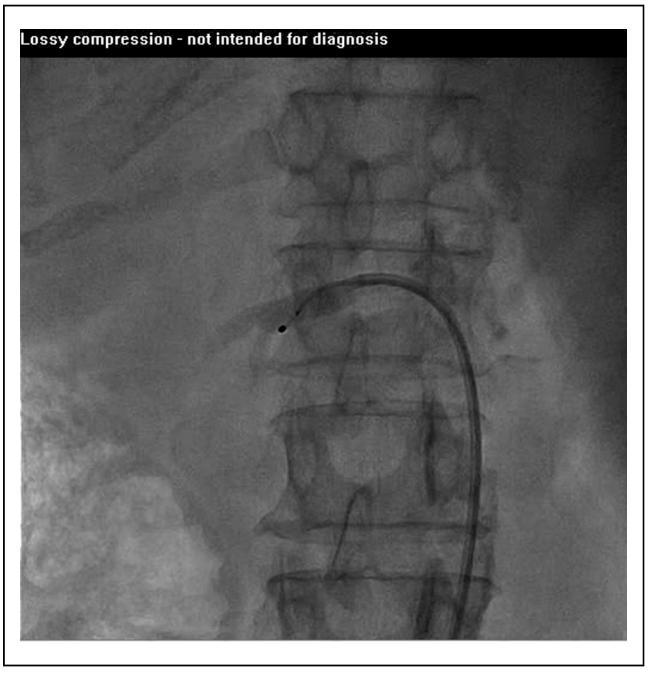
1. Left renal artery: patent with diameter ~4 mm
2. Right renal artery: 99% stenosis with diameter >4mm



[INTERVENTIONAL MANAGEMENT]

Procedural step. @Indication: 1. Resistant hypertension. 2. Right renal a. stenosis (99%)
@Procedure:
Transfemoral approach: Right femoral a. with 7Fr sheath
Transfemoral catheter: 7Fr. IMA

1. We performed renal artery angiography through right femoral artery with a 7 Fr. femoral sheath and a guiding catheter 7Fr. IMA to both sides of the renal arteries.
2. Left side renal artery denervation was done first with Symplicity ablation catheter. Wall-tip contact was satisfactory in all 6 shots and no particular alert code was noted during the procedure.
3. We then performed right side procedure with a 7Fr IMA guiding catheter and a 0.014-cm wire. REEF 5.0x20 mm with 10 atm balloon angioplasty was delivered at proximal right renal artery.
4. After withdrawing the balloon and wire, denervation was delivered smoothly with skip of the atherosclerotic site.
5. Finally we deployed INVATEC renal RX stent 6.0x24mm to cover the lesion till ostium.
6. After rotating the guiding catheter to optimize the alignment post-dilatation balloon, the stent was well-apposite at the acute-angle ostium.



Case Summary. At 1-month follow-up, the patient's office blood pressure went down to 112/50 mmHg, a reduction by 48/30 mmHg. At 3-month follow-up the office blood pressure was 118/56 mmHg, demonstrating efficacy persistent. The number of antihypertension drugs were also minimized to three.

Response rate of renal denervation is about 70% but patients with renal stenosis are not currently suggested for renal denervation. Meanwhile, renal angioplasty could achieve blood pressure reduction in only 1/3 cases theoretically. Hybrid treatment with both procedures could be beneficial in selective cases.

TCTAP C-180

Iron Man with Stents in All Four Limbs

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[1]Apollo Gleneagles Hospital, India

[CLINICAL INFORMATION]

Patient initials or identifier number. NPM

Relevant clinical history and physical exam. A 57 years gentleman presented in september 2012, with effort angina (CCS - Class II) and both lower limb claudication (Grade - III) for 2 years. His angiogram showed RCA total occlusion and both iliac artery stenosis. PTA was successfully done to both lower limb vessels. Patient remained asymptomatic for next one and half years (May 2014)) but subsequently he complained of claudication of both upper limbs. Repeat angio showed subtotal occlusion of both axillary arteries, patent stent in both legs.

Relevant test results prior to catheterization. His Complete Hemogram showed hemoglobin of 13 gm% and TLTCTAP C- 9600. Biochemistry: urea- 28 Creatinine- 0.9. ALT-25. AST-32.

His ECG showed non-specific ST-T changes in lead II, III, avF. On echocardiography he had mild hypokinesia of inferior wall with preserved LV systolic dysfunction with Ejection Fraction of 55%.

Relevant catheterization findings. Coronary angio (1st) Sept 2012

LMCA, LAD, LCX- normal.

RCA- Totally occluded from proximal part and filling retrogradely via collaterals from left system.

Both carotid arteries- normal.

Left lower limb- Critical 70-80% stenosis in proximal left common and proximal external iliac arteries. Right lower limb- Critical 80-90 % in proximal right iliac and proximal right femoral arteries.

Peripheral angio (2nd) May 2014

Totally occluded both axillary arteries with distal reformation via collaterals.